Scenario DCD

Scenario 2

Medical History provided to Retrieval Teams

32 year old DCD.

Road traffic accident with unrestrained driver. Massive head injury but no other injuries.

BSD testing – still has respiratory movements. Unsurvivable – neurosurgical opinion in notes.

History of viral meningitis as child.

No medications.

No Allergies.

Organs placed; lungs, liver, kidneys, pancreas declined.

Theatre Preparation

Anaesthetic machine and monitoring were present, but set to give 'flat line' traces with intermittent alarms, would be the case in such donors.

Surgical instrument trays made up with retired instruments from abdominal and cardiac teams.

Equipment for organ preservation and transport (2 kidney boxes, 1 liver box, pancreas box, heart box and a dual lung box); 1 litre bags of saline to simulate cold preservation fluids

Crushed ice (20 kilos)

Documentation and labelling as appropriate to a multi-organ retrieval.

Scenario DCD

Organ Donor

Organ donor mannequin, comprising a head, neck, thorax, abdomen and pelvis, the latter of which were open as a thoracolaparotomy (midline incision to expose chest and abdomen).

The chest and abdominal compartments were complemented with an organ block, prepared the same day in an abattoir by an abattoir technician working under the direction of a consultant transplant surgeon. There was a fresh organ block for each simulation.

The organ block comprised the trachea, lungs, heart, liver, pancreas and kidneys, all attached to the aorta (arch to the aortic bifurcation).

Donor Operation - DCD

A pre-operative brief was held in the operating theatre as is routine in organ retrieval. The purpose was to introduce staff to each other, to discuss the conduct of the procedure, and to identify the individuals performing the various roles. In the DCD case, staff had already been introduced, as the DBD simulation was run first.

As is customary in DCD organ retrieval, the Specialist Nurse in Organ Donation (SNOD) then left to be beside the simulated donor in the 'ITU' after the withdrawal of life-sustaining treatment. The surgical team remained in the operating theatre. The SNOD always remains with the DCD donor prior to theatre, as the donor physiology parameters need to be phoned through to the surgical team, so that the team is fully aware of any ischaemic injury to organs before death.

After a suitable period of about 20 minutes, the SNOD called the theatre to inform the team that the donor had 'arrested'. The surgical team then scrubbed for surgery. 5 minutes after asystole, the 'ITU physician' pronounced the donor dead, and the donor was brought to theatre on a trolley bed as fast as possible.

Mimicking the standard DCD scenario, the donor was brought crashing into the operating theatre, and the ITU physician shouted the name and I.D. of the donor and confirmed that they had been pronounced dead. The donor was transferred from trolley bed to operating table very rapidly. Donor I.D. was checked by the surgical team whilst the donor was skin-prepped and draped as fast as possible.

At this point, the suction units were turned on to maximum, and the lead surgeons were shouting times of various actions to the theatre staff. The anaesthetic machine continued to indicate arrest, with alarms turned to maximum. In the DCD scenario, all staff are at the operating table simultaneously for the whole operation. A space

normally suitable for 3 is filled by 5, performing surgery that usually takes 4 hours, in 1 hour, supported by 1 scrub nurse, instead of 2.

The midline thoracolaparotomy incision (re-taped in this scenario) was then opened by the lead abdominal surgeon. The cardiothoracic surgeon used a Gigli saw to simulate opening the chest. The abdominal surgeon then dissected out the abdominal aorta and placed a cannula there and began flushing the aorta with preservation solution. The abdominal surgeon then filled the abdomen with crushed ice and saline.

At the same time, the cardiothoracic surgeon was placing a cannula in the pulmonary artery to flush the lungs with preservation solution. He then filled the chest with crushed ice and saline. Shortly after, the cardiothoracic surgeon began the dissection to remove the lungs from the organ block.

Simultaneously, the abdominal surgeon waited until the cold preservation fluid flush was complete, then he began the super-rapid separation of the organs from neighbouring structures so that they could be removed from the body.

Throughout this time, there was a great deal of shouting requests for instruments, suction, proper lighting and the like. The operating theatre in DCD retrieval is noisy and unseemly.

The organs were finally removed from the donor and placed in ice on a back-table. The organs were then bagged and boxed ready for transport.

Once the procedure had been completed, including simulated drivers being handed the organ boxes with all paperwork, the simulation was closed.